

10/541010

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IN THE CLAIMS:

1. **(Currently Amended)** A method of automatically fabricating a suprastructure to be attached to an implant with the help of a digital model description of the shape, comprising the following steps:

recording a real clinical situation or a shaped clinical situation of the implant [(3; 13)] as digital data,

analyzing this situation and determining the implant axis [(5; 16)],

computing the optimum shape of the suprastructure [(1, 2)],
~~and characterized by the following steps:~~

separating the suprastructure into a first element (1) and a second element (2), and

fabricating the individual elements from one or more blanks [(11)] on the basis of said digital data with the aid of machining equipment.

2. **(Currently Amended)** A method as defined in claim 1, characterized in that wherein a mating surface between the digitized first element [(1)] of the suprastructure on the one hand and the digitized second element [(2)] of the suprastructure on the other hand, is determined.

3. **(Currently Amended)** A method as defined in claim 1 or claim 2, characterized in that wherein the shape of that element of the suprastructure which is to be connected to the implant is described by at

least two of the following parameters: the shoulder width, the tilt angle of the suprastructure relative to the longitudinal axis [(5)] of said implant [(3)], the angle of rotation of the suprastructure about the longitudinal axis [(16)] in said blank [(11)], and the height of said post.

4. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 3, characterized in that~~ claim 1, wherein one element of the suprastructure is an abutment and [that] the shape of an abutment [(2)] is optimized with reference to one or more or all the following parameters:

- a minimum value for the shoulder width;
- a maximum height of the post delimited by the tilt angle of the suprastructure relative to the longitudinal axis [(5)] of said implant [(3)], the geometry of said blank [(11)], and the height of the occlusal surface [(22)], the maximum height of the post being such that it is disposed at a maximum distance below the height of the occlusal surface [(22)];
- a minimum height of the post delimited by the position of the head of an occlusal screw [(14)];
- an angle of rotation of the abutment about the longitudinal axis in said blank [(11)], which is given by the relative position of said implant [(3; 13)] in the clinical situation.

5. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 4, characterized in that~~ claim 1, wherein the shape of said

blank [(11)] and the shape of the dental suprastructure [(1, 2)] are described in the coordinate system of the geometry [(6; 14)] for attachment to said implant [(3; 13)].

6. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 5~~, characterized in that claim 1, wherein determination of the axis of said implant [(5; 16)] is effected interactively by the user.

7. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 6~~, characterized in that claim 1, wherein one element of the suprastructure is an abutment and a further element of the suprastructure is a crown.

8. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 6~~, characterized in that claim 1, wherein one element of the suprastructure is an abutment and a further element of the suprastructure is a cap.

9. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 6~~, characterized in that claim 1, wherein one element of the suprastructure is an abutment and a further element of the suprastructure is a reduced crown.

10. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 6~~, characterized in that claim 1, wherein the suprastructure comprises three elements, and a first element of the suprastructure is an abutment and a second element of the suprastructure is a partially veneered crown and the third element is a veneer, and [that] not only the

mating surface between said first and second elements but also a mating surface between said third element and said first element and/or said second element is/are computed.

11. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 6,~~ characterized in that claim 1, wherein said suprastructure [(1')] comprises a number of abutments which are interconnected by a common frame construction.

12. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 11,~~ characterized in that claim 1, wherein the distribution rules can be varied by the user.

13. **(Currently Amended)** A method as defined in ~~any one of claims 1 to 12,~~ characterized in that claim 1, wherein that element of the suprastructure which is connected to the implant is computed in its final size and [that] the further element of the suprastructure connected to this element is computed as a provisional suprastructure having exterior dimensions which are smaller than the final exterior dimensions while retaining the mating surface.

14. **(Currently Amended)** A method as defined in claim 13, characterized in that wherein the same data set is used to compute said element of the suprastructure with its final dimensions.